

## **HOVENWEEP AND NATURAL BRIDGES NATIONAL MONUMENTS RESEARCH SUMMARY 2008**

**1) Study Title:** Soil Survey of Hovenweep National Monument, Utah

**Permit No.:** HOVE-2008-SCI-0001

**Principal Investigator:** Victor Parslow

**Purpose of Scientific Study:** To provide an updated soil and ecological site inventory for Hovenweep National Monument (HOVE), that meets National Cooperative Soil Survey (NCSS) standards and park management and planning needs.

**Findings/Accomplishments for 2008:** No survey activities were conducted in Hovenweep National Monument in FY 2008.

**2) Study Title:** A study of the distribution of *Catocala benjamini* and related *Catocala* in northeastern Arizona and southeastern Utah.

**Permit No.:** HOVE-2008-SCI-0002

**Principal Investigator:** John Peacock

**Purpose of Scientific Study:** The purpose of this study is to delineate the distribution of *Catocala benjamini* and related *Catocala* in northeastern Arizona and southeastern Utah, areas that are poorly, if at all, collected, and where little is known of *Catocala* distribution. A secondary objective is to determine the larval host plant (*Quercus*) associations where *Catocala* are collected.

**Findings/Accomplishments for 2008:** The principal investigator, John W. Peacock, and co-investigator, David Leatherman visited Hovenweep NM on 14 June 2008 in an attempt to locate any oaks that could serve as a larval hostplant for *Catocala benjamini* ute. No oaks were sited in the areas searched. This indicates that *C. benjamini* is not likely to be found in the Hovenweep area.

**3) Study Title:** Monitoring Protocols to Support Long-Term Monitoring of Aquatic Macroinvertebrates in National Park Service Units of the Northern Colorado Plateau Network

**Permit No.:** NABR-2008-SCI-0001

**Principal Investigator:** Anne Brasher

**Purpose of Scientific Study:** National Park Service units of the NCPN have a need for long-term monitoring of aquatic macroinvertebrates and riparian habitats. Monitoring the condition of aquatic ecosystems, including intermittent and perennial streams, springs, seeps, tinajas, and hanging gardens, is a high-priority need because of the great significance of these resources to parks and because of their sensitivity to a wide range of human impacts. The need for monitoring protocols is particularly urgent due to the ubiquity of factors potentially impacting aquatic systems, including flow diversion, flow regulation, water pollution, alteration to riparian habitat, up-stream development pressures, upland / upstream land-use activities, and water-rights issues. The National Park Service (NPS) Northern Colorado Plateau Network is developing long-term monitoring programs for aquatic ecosystems (streams, springs, seeps, tinajas, and hanging gardens). This study will provide new data in support of this program. Results will assist the National Park Service to manage water resources in Natural Bridges National Monument.

**Findings/Accomplishments for 2008:** No activity was conducted this report year.

**4) Study Title:** Soil Survey of Natural Bridges National Monument, Utah

**Permit No.:** NABR-2008-SCI-0002

**Principal Investigator:** Victor Parslow

**Purpose of Scientific Study:** To provide an updated soil and ecological site inventory for Natural Bridges National Monument (NABR), that meets National Cooperative Soil Survey (NCSS) standards and park management and planning needs.

**Findings/Accomplishments for 2008:** No soil survey field activities were conducted in Natural Bridges National Monument in 2008. Field work was completed in 2007. Work was restricted to database and manuscript preparation. A draft soil survey manuscript was submitted to NPS and the MO-8 Soil Survey Office in Phoenix, Arizona in 2008. Additional editing will be done in 2009.